

## ABSTRACT

Sensors are provided which enable detection with a high sensitivity in microchemistry and biochemical analysis by using devices integrated into a compact configuration and can be freely disposed on desired positions of a channel to perform detection.

A measuring apparatus for detecting information and outputting light according to the information, the apparatus comprising: an active layer for emitting light and a micro-optical cavity, wherein light emission is limited in the active layer due to the influence of the selection of a photoelectromagnetic field mode, the selection is made by the micro-optical cavity, the light emission and a degree of selection of a photoelectromagnetic field mode is changed according to an environmental condition of the micro-optical cavity, so that the light emission is changed and the environmental condition is measured according to a change in the light emission.